

PATENT CLAIMS

1. A method for the recovery of gold from a leaching residue or intermediate product containing iron and sulphur, which is generated in the atmospheric chloride leaching of a copper sulphide raw material, **characterised in that** the gold is leached from the residue or intermediate product in an aqueous solution of copper (II) chloride - sodium chloride in atmospheric conditions with the aid of the bivalent copper contained in said solution and oxygen-containing gas, when the oxidation-reduction potential of the suspension formed is kept at a value below 650 mV and the pH at a value of 1 - 3, whereby the iron and sulphur remain mainly undissolved; the dissolved gold is recovered by some known method and the undissolved residue is waste to be discarded.
5
- 10
- 15
2. A method according to claim 1, **characterised in that** the oxidation-reduction potential is kept in the range of 530 – 620 mV.
3. A method according to claim 1, **characterised in that** the pH of the suspension is kept at a value of 1.5 – 2.5.
20
4. A method according to claim 1, **characterised in that** the amount of bivalent copper in the suspension is 40 – 100 g/l.
- 25
5. A method according to claim 1, **characterised in that** the amount of sodium chloride in the suspension is 200 – 330 g/l.
6. A method according to claim 1, **characterised in that** the temperature is kept in the range between 80°C and the boiling point of the suspension.
30

7. A method according to claim 1, **characterised in that** the oxygen-containing gas is air.
8. A method according to claim 1, **characterised in that** the oxygen-containing gas is oxygen-enriched air.
5
9. A method according to claim 1, **characterised in that** the oxygen-containing gas is oxygen.
10. A method according to claim 1, **characterised in that** the dissolved gold is recovered using active carbon.
11. A method according to claim 1, **characterised in that** the dissolved gold is recovered by electrolysis.
10
15